

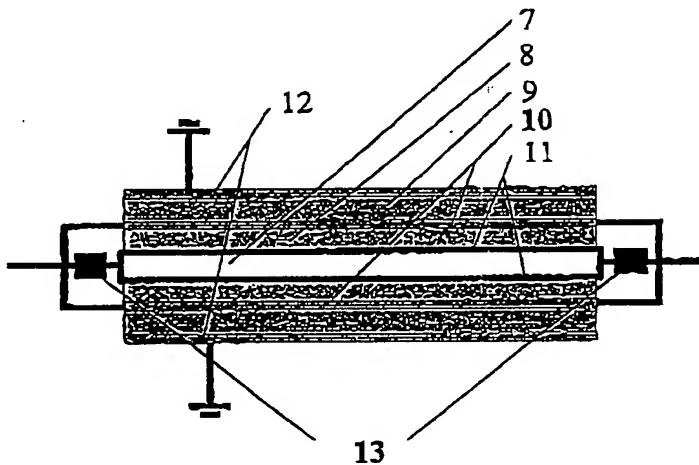
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(54) Title: A METHOD FOR OVERCURRENT PROTECTION IN A SUPERCONDUCTING CABLE



## (57) Abstract

By a method and a superconducting cable for overcurrent protection, a current detector comprising a circuit breaker or a current limiter is inserted in series with the superconducting cable, which current detector can be constituted by a superconducting material quenching at a lower current than the cable conductor of the superconducting cable. When the current in the superconducting material gets too high, it is for a short time period fed to a cold shunt that is coupled in parallel with the cable conductors of the superconducting cable. After the short time period, the current is fed to a hot shunt that is coupled in parallel outside the cable conductors of the cable, causing heat dissipation to be effected at room temperature. By use of the method and the cable according to the invention, destruction of the cable is prevented should the superconducting cable lose its superconductivity, e.g. due to cooling failure, whereupon normal operation may soon be resumed without restoration of damages being necessary.

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